To, GV / 3 copies
Mrs. Thulasi.

BANGALORE WATER SUPPLY AND SEWERAGE BOARD

OFFICE OF THE EXECUTIVE ENGINEER,
No.1 KAVERI DIVISION,
1st Floor, Shimsha Bhavan, 46th Cross, 8th Block, Jayanagar, Bangalore – 560 070.

No. BWSSB/EEK-1/AEEK-1-2/ S1c / 743 /2015-16 Dated: 15/10/2015

To,
M/s VA TECH WABAG Ltd
& VA TECH WABAG Gmbh(JV),
# 17, 200Ft Radial Road,
S.Kolathur(Near Kamatchi Hospital),
Chennai – 600 117.India

code updated on 30/10/15.

Sir,

Sub: Contract S1c: Turnkey Project: Construction of 60MLD Sewage Treatment Plant@ K&C Valley with Power Generation–Regarding Electrical Load List for K&C Valley STP.

Ref: 1. VA TECH WABAG Transmittal No:10P37/DT-772 DT: 11/09/2015.

****

Adverting to above, this office reviewed Electrical Load List for K&C Valley STP.

These Drawings/Documents are approved under following category:

Sl. No	Title	Reference	Code
1	Electrical Load List for K&C Valley STP	107P37-E0010-301 Rev-3	A

Requested to take appropriate action in this regard.

Thanking you,

Yours faithfully,

15/10/15
Executive Engineer,
Kaveri Division-1, BWSSB,
1st Floor, Shimsha Bhavan, 46th Cross, 8th Block,
Jayanagar, Bangalore – 560 082.

Copy Submitted to ACE (K-1) for kind information.
Copy to M/s. NMT for information and set of signed 3 copies for reference.

WABAG

Project	:	Bangalore Water Supply and Sewerage Project (II) Contract S1c: Sewage Treatment Plant at K&C Valley and ISPS at Sarakki, Agaram
Client	:	Bangalore Water Supply and Sewerage Board
Consultant	:	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd
Discipline	:	ELECTRICAL
Document Title		

ELECTRICAL LOAD LIST FOR K & C VALLEY STP

WABAG Doc No : 10P37-E0010-301 Rev No : 3

NJS - MM - TCE / BWSSB

DRAWING / DOCUMENT REVIEW STATUS

Date of Receipt : 18-09-15

- ☑ A — Approved, manufacture / construction may commence.
- ☐ B — Acceptable subject to changes indicated. Resubmit for approval but manufacture / construction may commence.
- ☐ C — Amend as comments indicated and resubmit for approval
- ☐ D — Comments note in letter / memo attached to approval. Transmittal Nr.....Dated.....
  Amend as comments indicated and resubmit for approval
- ☐ E — Amend as comments indicated resubmit for record.
- ☐ F — Comments noted in letter / memo attached to forwarding Transmittal Nr.....Dated.....
  Amend as comments indicated and resubmit for record.
- ☐ G — Drawing of this category is for information and not required to be approved.

Approval of drawings / documents does not absolve contractor / vendor from any responsibilities for their accuracy or for the design, performance and safety of the Plant / Works or any other obligations under the contract and Indian Statutory laws nor does it limit the employer's right under the contract.

For NJS - MM - TCE	Verified by	R. B	Date 08/10/15
For BWSSB	Checked by		Date
	Reviewed by	M. Sen	Date 15/10/15
	Approved by Chief Engineer (Kaveri)		Date

Chief Engineer (i)
BWSSB

Rev No	Date	Description	Prepared	Checked	Approved
3	10-Sep-15	Revised based on Mechanical Load	VGT	GV	TCB
2	10-Dec-14	Revised based on Mechanical Load	VGT	GV	TCB
1	22-Aug-13	Revised based on Mechanical Load	PJP	GV	TCB
0	25-Feb-13	Submitted For Approval	MSP	GV	TCB

Total No. of Sheets (Including this Cover Sheet) 7

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NJS-MM-TCE CONSULTANTS BANGALORE

NJS -MM- TCE
RECEIVED ON 18-09-15
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ELECTRICAL LOAD LIST : K&C VALLEY STP

WABAG	Project	Bangalore Water Supply and Sewerage Project (II) - Contract S1c : K&C Valley Sewage Treatment Plant and ISPS at Sarakki, Agaram
	Client	Bangalore Water Supply and Sewerage Board
	Consultant	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd

S.No	Tag No	Description	UOM	Total	Working	Standby	Capacity (m3/hr)	Head (m)	Specific gravity	Efficiency	Motor Margin	Bkw	Motor KW	Working load(KW)	Standby load(KW)	Motor Speed (rpm)	Duty	Mounting	Type of Starting	Electrical Drive Type
Load Centre - 1 : STP substation																				
Head Works loads																				
1	MX - 3104 A/B/C/D	Feeder for Medium screen	Nos	1	1	0	NA	NA	NA	NA	1.4	3.2	4.5	4.5	0	NA	Continuous	NA	Direct	NA
2	MX - 3109A/B/C	Motor for Grit Mechanism	Nos	3	3	0	NA	NA	NA	NA	1.7	0.45	0.75	2.25	0	1440	Continuous	Horizontal	DOL	Constant Speed
3	MX - 3111A/B/C	Motor for Grit Classifer	Nos	3	3	0	NA	NA	NA	NA	1.1	0.66	0.75	2.25	0	1440	Continuous	Horizontal	DOL	Constant Speed
4	MP - 3113A/B/C	Organic Return pump	Nos	3	3	0	NA	NA	NA	NA	1.7	0.22	0.37	1.11	0	1440	Continuous	Vertical	DOL	Constant Speed
Screen (included Under Serial no.1)																				
5	MX - 3104A/B/C/D	Motor for Medium Screen Mechanism	Nos	4	3	1	-	-	-	-	1.3	1.2	1.5	4.5	1.5	1500	Intermittent	Horizontal	VFD	Variable Speed
6	MY - 3106	Motor for Medium Screen Conveyor	Nos	1	1	0	-	-	-	-	1.9	0.8	1.5	1.5	0	1500	Intermittent	Horizontal	DOL	Constant Speed
Primary Treatment loads																				
7	MX - 3203A/B/C	Motor for Primary Clarifier Mechanism	Nos	3	3	0	NA	NA	NA	NA	1.7	0.32	0.55	1.65	0	1000	Continuous	Horizontal	DOL	Constant Speed
8	MP - 3204A/B/C	Motor for Primary Scum pumps	Nos	2	1	1	26.3	17.5	1.02	62	1.5	2.06	3	3	3	1450	Intermittent	Vertical	DOL	Constant Speed
9	MP - 3206A - F	Motor for Primary Sludge pumps	Nos	6	3	3	30	9	1.02	36	1.8	2.11	3.7	11.1	11.1	967	Continuous	Horizontal	VFD	Variable Speed
10	MP 3210A/B	Motor for Dewatering pumps in Primary Sludge Pump Station	Nos	2	1	1	10	10	1.02	22	1.2	1.26	1.5	1.5	1.5	2900	Intermittent	Vertical	DOL	Constant Speed
11	MA - 3303A-H	Anaerobic Mixers	Nos	6	6	0	NA	NA	NA	NA	1.5	2.17	3.3	19.8	0	705	Continuous	Horizontal	DOL	Constant Speed
12	MA - 3305A-L	Anoxic Mixers	Nos	9	9	0	NA	NA	NA	NA	1.4	5.5	7.6	68.4	0	475	Continuous	Horizontal	Star Delta	Constant Speed
Secondary Treatment loads																				
13	MX - 3318A/B/C	Motor for Secondary Clarifier Mechanism	Nos	3	3	0	NA	NA	NA	NA	1.1	1.32	1.5	4.5	0	1000	Continuous	Horizontal	DOL	Constant Speed
14	MP - 3322A-H	Motor for RAS Pump	Nos	8	6	2	417	10	1.02	82	1.3	14.11	18.5	111	37	1500	Continuous	Horizontal	VFD	Variable Speed
15	MP - 3325A/B	Motor for Dewatering pumps in RAS Pump Station	Nos	2	1	1	10	10	1.02	22	1.2	1.26	1.5	1.5	1.5	2900	Intermittent	Vertical	DOL	Constant Speed
16	MP - 3321A/B	Motor for Secondary Scum Pump	Nos	2	1	1	26.3	30	1.02	50	1.3	4.39	5.5	5.5	5.5	1500	Intermittent	Vertical	DOL	Constant Speed
17	MY - 3323	Monorail Hoist - RAS Pumphouse (Hoist + Travel Motor)	Nos	1	1	0	NA	NA	NA	NA	-	-	1.8	1.8	0	1500	Intermittent	Horizontal	DOL	Constant Speed

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ELECTRICAL LOAD LIST : K&C VALLEY STP

WABAG

Project	Bangalore Water Supply and Sewerage Project (II) - Contract S1c : K&C Valley Sewage Treatment Plant and ISPS at Sarakki, Agaram
Client	Bangalore Water Supply and Sewerage Board
Consultant	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd

S.No	Tag No	Description	UOM	Total	Working	Standby	Capacity (m3/hr)	Head (m)	Specific gravity	Efficiency	Motor Margin	Bkw	Motor KW	Working load(KW)	Standby load(KW)	Motor Speed (rpm)	Duty	Mounting	Type of Starting	Electrical Drive Type
Chemical Building loads																				
18	MP - 3309A-F	Motor for Mixed Liquor Recycle Pump	Nos	6	3	3	3333	2.5	1.02	74	1.2	32	37	111	111	979	Intermittent	Vertical	VFD	Variable Speed
19	MP - 3332A/B/C	Motor for Alum Dosing pump	Nos	3	2	1	20	0.2	-	34	2.1	0.18	0.37	0.74	0.37	1440	Intermittent	Vertical	VFD	Variable Speed
20	MA - 3316	Motor for Alum Dispersion Rapid Mixer	Nos	1	1	0	NA	NA	NA	NA	1.7	4.5	7.5	7.5	0	1500	Continuous	Horizontal	Star Delta	Constant Speed
21	MA - 3329A/B	Motor for Alum Dosing tank Mixer	Nos	2	2	0	NA	NA	NA	NA	1.7	0.45	0.75	1.5	0	1500	Continuous	Vertical	DOL	Constant Speed
22	MY - 3311A/B	Motorised Monorail Hoist - MLR Pumps (Hoist + Travel Motor)	Nos	2	2	0	NA	NA	NA	NA	NA	NA	3.3	6.6	0	1500	Intermittent	Horizontal	DOL	Constant Speed
Chlorination loads																				
23	MA - 3401	Motor for Agitator for Chlorine Contact Tank	Nos	1	1	0	NA	NA	NA	NA	1.8	0.84	1.5	1.5	0	1500	Continuous	Vertical	DOL	Constant Speed
24	MP - 3405	Motor for Sampling Pump	Nos	1	1	0	NA	NA	NA	NA	1.9	0.2	0.37	0.37	0	1500	Intermittent	Horizontal	DOL	Constant Speed
25	MP - 3407	Motor for Borewell Pumps	Nos	2	1	1	NA	NA	NA	NA	1.3	6	7.5	7.5	7.5	1500	Intermittent	Vertical	Star Delta	Constant Speed
26	MP - 3409A/B	Motor for Chlorine Booster pump	Nos	2	1	1	24	40	1	60	1.7	4.35	7.5	7.5	7.5	2900	Continuous	Horizontal	Star Delta	Constant Speed
27	NA	Miscellaneous Load for Chlorination (Instruments etc)	Nos	1	1	0	NA	NA	NA	NA	1.0	0.15	0.15	0.15	0	-	Intermittent	NA	DOL	Constant Speed
28	NA	Feeder for Chlorine Leak Absorption System	Nos	1	1	0	NA	NA	NA	NA	1.2	3.7	4.4	4.4	NA	1450	Intermittent	NA	Direct	NA
29	MP - 3011A/B	Motor for Plant Water Pump	Nos	2	1	1	100	20	1	52	1.4	10.48	15	15	15	1500	Continuous	Vertical	Star Delta	Constant Speed
30	MP - 3103A/B	Motor for Non Potable Water Booster Pump	Nos	2	1	1	15	40	1	54	2.5	3.01	7.5	7.5	7.5	1500	Intermittent	Vertical	Star Delta	Constant Speed
31	MY - 3410	Motorised Monorail Hoist - Chlorination Building (Hoist + Travel Motor)	Nos	1	1	0	NA	NA	NA	NA	NA	NA	5.3	5.3	0	1500	Intermittent	Horizontal	DOL	Constant Speed
32	MF - 3411A-F	Forced Ventilation for Chlorine Building	Nos	6	4	2	NA	NA	NA	NA	1.9	0.77	1.5	6	3	1500	Continuous	Horizontal	DOL	Constant Speed
Chlorine Leak Absorption System (included Under Serial no.28)																				
33	MP - 3417A/B	Motor for Caustic solution pump (Chlorine Leak Absorption System)	Nos	2	1	1	NA	NA	NA	NA	1.2	1.8	2.2	2.2	2.2	1450	Intermittent	Horizontal	DOL	Constant Speed
34	MK - 3420A/B	Motor for Air blower (Chlorine Leak Absorption system)	Nos	2	1	1	NA	NA	NA	NA	1.2	1.8	2.2	2.2	2.2	1445	Intermittent	Horizontal	DOL	Constant Speed
Thickener loads																				
35	MX - 3503A/B	Motor for Thickener Mechanism	Nos	2	2	0	NA	NA	NA	NA	1.6	0.92	1.5	3	0	1000	Intermittent	Horizontal	DOL	Constant Speed
36	MP - 3504A/B/C	Motor for Thickened Sludge Transfer pump	Nos	3	2	1	21	20	1.02	36.1	1.7	3.22	5.5	11	5.5	1500	Intermittent	Horizontal	VFD	Variable Speed
37	MP - 3507A/B	Motor for Dewatering Pump in Thickened Sludge Pump Station	Nos	2	1	1	10	10	1.02	22	1.2	1.26	1.5	1.5	1.5	2900	Intermittent	Vertical	DOL	Constant Speed
38	MX - 3420 C/D	Motor for LDM	Nos	2	2	0	NA	NA	NA	NA	0.5	0.75	1.1	2.2	0	1000	Intermittent	Horizontal	DOL	Constant Speed

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Project	Bangalore Water Supply and Sewerage Project (II) - Contract S1c: K&C Valley Sewage Treatment Plant and ISPS at Sarakki, Agaram
Client	Bangalore Water Supply and Sewerage Board
Consultant	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd

S.No	Tag No	Description	UOM	Total	Working	Standby	Capacity (m3/hr)	Head (m)	Specific gravity	Efficiency	Motor Margin	Bkw	Motor KW	Working load(KW)	Standby load(KW)	Motor Speed (rpm)	Duty	Mounting	Type of Starting	Electrical Drive Type
Digester loads																				
39	MP - 3604A/B/C/D	Motor for Digester Sludge Circulation pump	Nos	4	2	2	52	15	1.02	30.4	1.3	7.1	9.3	18.6	18.6	1500	Intermittent	Horizontal	Star Delta	Constant Speed
40	MP - 3606A/B	Motor for Dewatering Pump in Digester Building	Nos	2	1	1	10	10	1.02	22	1.2	1.26	1.5	1.5	1.5	2900	Intermittent	Vertical	DOL	Constant Speed
41	MK - 3610A/B/C	Motor for Digester Gas Mixing Blower	Nos	3	2	1	1593	10.5	NA	NA	1.3	69.45	90	180	90	1440	Intermittent	Horizontal	VFD	Variable Speed
42	NA	Load for Gas Flare System	Nos	1	1	0	NA	NA	NA	NA	1.4	1.1	1.5	1.5	0	NA	Intermittent	NA	NA	NA
43	MP - 3601 A/BC	Secondary Digester Recirculation Pump	Nos	3	2	1	320	7	1.02	45	1.4	13.1	18.5	37	18.5	1440	Intermittent	Horizontal	VFD	Constant Speed
Centrifuge loads																				
43	MP - 3703 A/B	Motor for Centrifuge Feed Pump	Nos	2	1	1	25	15	1.02	30.1	1.6	3.39	5.5	5.5	5.5	1450	Intermittent	Horizontal	VFD	Variable Speed
44	MP - 3705A/B	Motor for Dewatering Pump in Centrifuge Feed Pump House	Nos	2	1	1	10	10	1.02	22	1.2	1.28	1.5	1.5	1.5	2900	Intermittent	Vertical	DOL	Constant Speed
45	MX - 3707	Motor for Dry Polymer Feeder	Nos	1	1	0	NA	NA	NA	NA	1.7	0.66	1.1	1.1	0	1500	Intermittent	Horizontal	DOL	Constant Speed
46	MA - 3708A/B	Motor for Polymer Batch Tank Mixer	Nos	2	1	1	NA	NA	NA	NA	1.9	1.18	2.2	2.2	2.2	1500	Intermittent	Vertical	DOL	Constant Speed
47	MP - 3709A/B	Motor for Polymer Metering Pump	Nos	2	1	1	3	25	-	34	1.5	1.5	2.2	2.2	2.2	1500	Intermittent	Vertical	VFD	Variable Speed
48	MX - 3711A/B	Feeder for Dewatering Centrifuge	Nos	2	1	1	NA	NA	NA	NA	1.3	15.7	20.7	20.7	20.7	1500	Continuous	NA	Direct	VNA
49	MY - 3713	Motor for Belt Conveyor for Centrifuge	Nos	1	1	0	NA	NA	NA	NA	1.7	0.9	1.5	1.5	0	1500	Continuous	Horizontal	DOL	Constant Speed
50	MY - 3714A/B	Motor for Dewatered Sludge Hopper	Nos	2	1	0	NA	NA	NA	NA	1.5	1	1.5	1.5	0	1500	Intermittent	Horizontal	DOL	Constant Speed
51	MY - 3712	Monorail Hoist - Centrifuge Building (Hoist + Travel Motor)	Nos	1	1	0	NA	NA	NA	NA	NA	NA	5.3	5.3	0	1500	Intermittent	Horizontal	DOL	Constant Speed
52	MP - 3016A/B	Motor for Plant Drain Pump	Nos	2	1	1	250	15	1.02	68	2.2	16.91	37	37	37	1500	Intermittent	Vertical	Star Delta	Constant Speed
53	NA	Motor for Electrical Hoist	Nos	1	1	0	NA	NA	NA	NA	NA	NA	5.5	5.5	0	1500	Intermittent	Horizontal	Direct	Constant Speed
Chlorine Leak Absorption System (included Under Serial no.48)																				
54	MX - 3711A/B	Motor for Dewatering Centrifuge(Main Drive)	Nos	2	1	1	NA	25	NA	NA	1.3	14	18.5	18.5	18.5	1500	Continuous	Horizontal	VFD	Variable Speed
55	MK - 3711 A/B	Motor for Dewatering Centrifuge(Back Drive)	Nos	2	1	1	NA	25	NA	NA	1.3	1.7	2.2	2.2	2.2	1500	Continuous	Horizontal	VFD	Variable Speed
Boiler Building loads																				
56	MP - 3905A/B/C	Hot water Recirculation pump	Nos	3	2	1	26	45	1	61	1.4	5.24	7.5	15	7.5	2900	Intermittent	Horizontal	Star Delta	Constant Speed
57	MK - 3817A/B	Motor for bio gas blower	Nos	2	1	1	413	3.5	NA	NA	1.4	6.84	9.3	9.3	9.3	1500	Continuous	Horizontal	Star Delta	Constant Speed
58	NA	Load for Gas Scrubber(80A Feeder)	Nos	1	1	0	NA	NA	NA	NA	NA	NA	22	22	0	1500	Continuous	NA	NA	NA
59	NA	Load for Hot Water Boiler	Nos	2	1	1	NA	NA	NA	NA	1.3	6	7.5	7.5	7.5	1500	Intermittent	NA	NA	NA
70	MX - 3409 A/B	Motor for Filter Water Pump	Nos	2	1	1	20	40	1	50	1.5	3.69	5.5	5.5	5.5	1500	Intermittent	NA	NA	NA

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Consultant	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd

S.No	Tag No	Description	UOM	Total	Working	Standby	Capacity (m3/hr)	Head (m)	Specific gravity	Efficiency	Motor Margin	Bkw	Motor KW	Working load(KW)	Standby load(KW)	Motor Speed (rpm)	Duty	Mounting	Type of Starting	Electrical Drive Type
Engine Auxiliary loads																				
60		Motor for Fresh lube oil pump	Nos	1	1	0	NA	NA	NA	NA	0.9	0.87	0.75	0.75	0	1500	Intermittent	Horizontal	DOL	Constant Speed
61	NA	Motor for Waste lube oil pump	Nos	1	1	0	NA	NA	NA	NA	0.9	0.87	0.75	0.75	0	1500	Intermittent	Horizontal	DOL	Constant Speed
62	NA	Motor for Engine Cooling pump	Nos	1	1	0	NA	NA	NA	NA	0.9	0.87	0.75	0.75	0	1500	Intermittent	Horizontal	DOL	Constant Speed
63	NA	Motor for Cooling Tower Fan	Nos	1	1	0	NA	NA	NA	NA	0.9	0.87	0.75	0.75	0	1500	Intermittent	Horizontal	DOL	Constant Speed
64	NA	Motor for Engine Cooling Tower Water Circulation pump	Nos	1	1	0	NA	NA	NA	NA	1.7	1.3	2.2	2.2	0	1500	Continuous	Horizontal	DOL	Constant Speed
65	NA	Motor Radiator	Nos	1	1	0	NA	NA	NA	NA	1.4	7.7	11	11	0	1500	Continuous	Horizontal	DOL	Constant Speed
66	NA	Motor for LT Circuit pump	Nos	1	1	0	NA	NA	NA	NA	1.5	3.69	5.5	5.5	0	1500	Continuous	Horizontal	DOL	Constant Speed
67	NA	Motor for Ventilation Blower for Gas Engine	Nos	1	1	0	NA	NA	NA	NA	1.5	7.7	11.2	11.2	0	1500	Continuous	Horizontal	DOL	Constant Speed
68	NA	Motor for Ventilation for Air Washer Pump	Nos	6	4	2	NA	NA	NA	NA	1.7	0.43	0.75	3	1.5	1500	Continuous	Horizontal	DOL	Constant Speed
69	NA	Battery and Battery Charger for Switchgear	Nos	1	1	0	NA	NA	NA	NA	NA	NA	1.5	1.5	0	NA	Continuous	NA	Direct	NA
70	NA	Control Room AC	Nos	1	1	0	NA	NA	NA	NA	NA	NA	1.5	1.5	0	NA	Continuous	NA	Direct	NA
71	NA	Generator Control Panel Load	Nos	1	1	0	NA	NA	NA	NA	NA	NA	2	2	0	NA	Continuous	NA	Direct	NA
Motorised Valves																				
72	MKGV - 30101	Motorised Knief gate at medium Screen Inlet	Nos	1	1	0	NA	NA	NA	NA	1.2	4.17	5	5	0	2800	Intermittent	Horizontal	DOL	Constant Speed
73	FCV - 30401-30402	Motorised Flow control valve for Primary Sludge Header	Nos	2	2	0	NA	NA	NA	NA	1.7	0.22	0.37	0.74	0	1500	Intermittent	Horizontal	DOL	Constant Speed
74	MKGV - 30501	Motorised Knife Gate Valve from RAS pump discharge to Anaeobic zone	Nos	1	1	0	NA	NA	NA	NA	1.2	3.4	4	4	0	2800	Intermittent	Horizontal	DOL	Constant Speed
75	MKGV - 30502, 30503, 30504	Motorised Knife Gate Valve for RAS pump discharge to Anoxic Zone	Nos	3	3	0	NA	NA	NA	NA	1.2	0.47	0.55	1.65	0	2800	Intermittent	Horizontal	DOL	Constant Speed
76	FCV - 30501, 30502, 30503	Flow Control Valve at Aeration Basin	Nos	3	3	0	NA	NA	NA	NA	1.5	0.5	0.75	2.25	0	1500	Intermittent	Horizontal	DOL	Constant Speed
77	MKGV - 30801	Motorised Knife Gate Valve for WAS	Nos	1	1	0	NA	NA	NA	NA	1.2	0.15	0.18	0.18	0	2800	Intermittent	Horizontal	DOL	Constant Speed
78	FCV - 31401-31402	Flow Control Valve Thickened Sludge Pump discharge to Didester Building	Nos	2	2	0	NA	NA	NA	NA	1.7	0.22	0.37	0.74	0	1500	Intermittent	Horizontal	DOL	Constant Speed
79	MBFV - 31601-31602	Motorised Butterfly Valve for Digester gas mixing blower header to Bio Gas Storage Tank	Nos	2	2	0	NA	NA	NA	NA	1.7	0.22	0.37	0.74	0	1500	Intermittent	Horizontal	DOL	Constant Speed
80	MKGV - 31701-31702	Motorised Knief Gate Valve for Sludge/Gas Sto. Tank sludge disch to Centrifuge feed Pump.	Nos	2	2	0	NA	NA	NA	NA	1.2	0.15	0.18	0.36	0	2800	Intermittent	Horizontal	DOL	Constant Speed
81	MBFV - 31901	Motorised Butterfly Valve for Dry Polymer Feeder	Nos	1	1	0	NA	NA	NA	NA	1.7	0.22	0.37	0.37	0	1500	Intermittent	Horizontal	DOL	Constant Speed
82	MBFV - 32101	Motorised Butterfly Valve for Gas Blower Discharge	Nos	1	1	0	NA	NA	NA	NA	1.7	0.22	0.37	0.37	0	1500	Intermittent	Horizontal	DOL	Constant Speed
83	MBFV - 32301	Motorised Butterfly Valve for Gas Flare Inlet	Nos	1	1	0	NA	NA	NA	NA	1.7	0.22	0.37	0.37	0	1500	Intermittent	Horizontal	DOL	Constant Speed
84	MBFV - 32401	Motorised Butterfly Valve in Gas Scrubber outlet	Nos	1	1	0	NA	NA	NA	NA	1.7	0.22	0.37	0.37	0	1500	Intermittent	Horizontal	DOL	Constant Speed
85	MBFV - 32501-32502	Motorised Butterfly Valve for Hot water Boiler inlet	Nos	2	2	0	NA	NA	NA	NA	1.7	0.22	0.37	0.74	0	1500	Intermittent	Horizontal	DOL	Constant Speed
86	MGV - 32501-32502	Motorised Gate Valve for Hot water Boiler inlet	Nos	2	2	0	NA	NA	NA	NA	1.7	0.22	0.37	0.74	0	1500	Intermittent	Horizontal	DOL	Constant Speed

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ELECTRICAL LOAD LIST : K&C VALLEY STP

Project	Bangalore Water Supply and Sewerage Project (II) - Contract S1c : K&C Valley Sewage Treatment Plant and ISPS at Sarakki, Agaram
Client	Bangalore Water Supply and Sewerage Board
Consultant	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd

S.No	Tag No	Description	UOM	Total	Working	Standby	Capacity (m3/hr)	Head (m)	Specific gravity	Efficiency	Motor Margin	Bkw	Motor KW	Working load(KW)	Standby load(KW)	Motor Speed (rpm)	Duty	Mounting	Type of Starting	Electrical Drive Type
HVAC Load																				
87	MF - 3208 A-C	Exhaust Fan (Primary Sludge Pump Station)	Nos	3	3	0	NA	NA	NA	NA	NA	NA	0.55	1.65	0	1500	Continuous	Horizontal	Direct	Constant Speed
88	MF - 3324 A-F	Exhaust Fan (RAS Pump House)	Nos	6	6	0	NA	NA	NA	NA	NA	NA	0.75	4.5	0	1500	Continuous	Horizontal	Direct	Constant Speed
89	MF - 3333 A-D	Exhaust Fan (Chemical Building)	Nos	4	4	0	NA	NA	NA	NA	NA	NA	0.37	1.48	0	2840	Continuous	Horizontal	Direct	Constant Speed
90	MF - 3505A-D	Exhaust Fan (Thickened Sludge Pump House)	Nos	4	4	0	NA	NA	NA	NA	NA	NA	0.37	1.48	0	1500	Continuous	Horizontal	Direct	Constant Speed
91	MF - 3607 A/B & 3704 A/B	Exhaust Fan (Digester Building) & Centrifuge Feed pump station	Nos	4	4	0	NA	NA	NA	NA	NA	NA	0.55	2.2	0	1500	Continuous	Horizontal	Direct	Constant Speed
92	MF - 3616 A/B	Exhaust Fan (Digester Building)	Nos	2	2	0	NA	NA	NA	NA	NA	NA	0.55	1.1	0	1500	Continuous	Horizontal	Direct	Constant Speed
93	MF - 3171 A/B	Exhaust Fan (Centrifuge Feed Pump House)	Nos	2	2	0	NA	NA	NA	NA	NA	NA	0.37	0.74	0	1500	Continuous	Horizontal	Direct	Constant Speed
94	MF - 3777 A-F	Exhaust Fan (Centrifuge Building)	Nos	6	6	0	NA	NA	NA	NA	NA	NA	0.55	3.3	0	1500	Continuous	Horizontal	Direct	Constant Speed
95	MF - N A	Exhaust Fan (Biogas Blower and Boiler Room)	Nos	12	12	0	NA	NA	NA	NA	NA	NA	0.37	4.44	0	1500	Continuous	Horizontal	Direct	Constant Speed
96	MF - N A	Ventilation Fans for Switchgear Room	Nos	12	12	0	NA	NA	NA	NA	NA	NA	0.37	4.44	0	1500	Continuous	Horizontal	Direct	Constant Speed
97	MF - N A	Ventilation Fans for Workshop	Nos	3	3	0	NA	NA	NA	NA	NA	NA	0.37	1.11	0	1500	Continuous	Horizontal	Direct	Constant Speed
98	MF - N A	Ventilation Fans for Guard Room	Nos	1	1	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
99	MF - 3411 A-D	Ventilation fans for Chlorine building & chlorinator room	Nos	3	3	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
100	MF - 3411 E						NA	NA	NA	NA	NA	NA								
101	MF - 3411 F	Ventilation fans for Chlorine Booster Pump Room	Nos	1	1	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
102	MF - 3314 A-H	Ventilation fans for Process Air Blower Room	Nos	8	8	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
103	MF - 3324 A-F	Ventilation fans for substation	Nos	6	6	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
104	MF - 3777 G-L	Ventilation fans for Centrifuge Building MCC	Nos	6	6	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
105	MF - A-F	Ventilation fans for DG MCC	Nos	6	6	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
106	MF - 3324 G-H	Ventilation fans for RAS MCC	Nos	2	2	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
107	MF - 3208 D-G	Ventilation fans for Primary Sludge MCC	Nos	4	4	0	NA	NA	NA	NA	NA	NA	0.37	0.37	0	1500	Continuous	Horizontal	Direct	Constant Speed
108	MF - N A	Split AC - 1.5 T	Nos	2	2	0	NA	NA	NA	NA	NA	NA	2.2	4.4	0	1500	Intermittant	Horizontal	Direct	Constant Speed
Miscellaneous Load																				
109	N A	Laboratory Load	Nos	1	1	0	NA	NA	NA	NA	3.3	3	10	10	0	NA	Continuous	NA	Direct	NA
110	N A	Lighting Load	Nos	1	1	0	NA	NA	NA	NA	1.0	55	55	55	0	NA	Continuous	NA	Direct	NA
111	N A	Employer Site Office	Nos	1	1	0	NA	NA	NA	NA	1.0	10	10	10	0	NA	Continuous	NA	Direct	NA
112	N A	Instrument Load	Nos	1	1	0	NA	NA	NA	NA	1.0	12	12	12	0	NA	Continuous	NA	Direct	NA
113	N A	Miscellaneous Load	Nos	1	1	0	NA	NA	NA	NA	1.0	20	20	20	0	NA	Continuous	NA	Direct	NA

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Project	Bangalore Water Supply and Sewerage Project (II) - Contract S1c : K&C Valley Sewage Treatment Plant and ISPS at Sarakki, Agaram
Client	Bangalore Water Supply and Sewerage Board
Consultant	Nippon Jogesuido Sekkei Co. Ltd, Mott Mac Donald Ltd, Tata Consulting Engineers Ltd

S.No	Tag No	Description	UOM	Total	Working	Standby	Capacity (m3/hr)	Head (m)	Specific gravity	Efficiency	Motor Margin	Bkw	Motor KW	Working load(KW)	Standby load(KW)	Motor Speed (rpm)	Duty	Mounting	Type of Starting	Electrical Drive Type
Load Centre - 2 : Process Air Blower PMCC																				
114	MK - 3312A/B/C/D	Aeration Air Blowers	Nos	4	3	1	15600	0.7	N A	84	1.2	307	355	1065	355	3000	Continuous	Horizontal	Soft Starter	Constant Speed
115	N A	Feeder for Aeration Air Blowers	Nos	4	3	1	N A	NA	NA	NA	N A	12.491	14.9892	44.9676	14.9892	NA	Continuous	NA	Direct	NA
116	MF - 3314A-J	Exhaust Fan in Process Air Blower Building	Nos	14	14	0	N A	NA	NA	NA	1.7	0.22	0.37	5.18	0	1500	Continuous	Horizontal	Direct	Constant Speed
117	MY - 3313	EOT - Lifting Drive (Hoist +LT & CT Travel Motor)	Nos	1	1	0	N A	NA	NA	NA	N A	NA	5.3	5.3	0	1500	Intermittent	Horizontal	Direct	Constant Speed
118	N A	Portable Dewatering Pump (Aeration Tank)	Nos	2	2	0	350	NA	NA	NA	N A	22	30	60	0	N A	Intermittent	Vertical	Direct	Constant Speed
119	N A	Portable Actuator	Nos	1	1	0	N A	NA	NA	NA	N A	NA	0.37	0.37	0	N A	Intermittent	Horizontal	Direct	Constant Speed
Gas Scrubber Load (Included under Serial no. 3 of Boiler Building loads)																				
120	N A	Motor for Air Blower	Nos	2	1	1	-	-		-	1.2	6.25	7.5	7.5	7.5	1500	Continuous	Vertical	VFD	Variable
121	MP - 3810A/B	Motor for NaOH Dosing Pump	Nos	2	1	1	-	-		-	1.7	0.45	0.75	0.75	0.75	1500	Continuous	Horizontal	DOL	Constant Speed
122	N A	Motor for Scrubber Pump-Stage-1	Nos	2	1	1	-	-		-	1.7	1.30	2.2	2.2	2.2	1500	Continuous	Horizontal	DOL	Constant Speed
123	N A	Motor for Scrubber Pump-Stage-2	Nos	2	1	1	-	-		-	1.7	1.3	2.2	2.2	2.2	1500	Continuous	Horizontal	Star / Delta	Constant Speed
124	N A	Motor for Digester	Nos	2	1	1	-	-		-	1.1	0.18	0.2	0.375	0.2	1500	Continuous	Horizontal	DOL	Constant Speed

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